6887

TWIN DIODE

7-PIN MINIATURE TYPE

For switching applications in electronic computers

GENERAL DATA

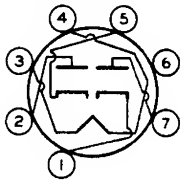
Electrical:

Heater, Pure Tungsten, for Unipotential Cathodes:		
Voltage	6.3	ac or dc volts
Current	0.2	amp
Direct Interelectrode Capacitances (Each unit, approx.):○		
Plate to cathode	1.4	μμf
Plate to cathode, internal shield, and heater	2.2	μμf
Cathode to plate, internal shield, and heater	3.5	μμf
Heater to cathode	2.1	μμf

Mechanical:

Mounting Position	Any
Maximum Overall Length	1-5/8"
Maximum Seated Length	1-3/8"
Length, Base Seat to Bulb Top (Excluding tip)	1" ± 3/32"
Maximum Diameter	3/4"
Bulb	T5-1/2
Base	Small-Button Miniature 7-Pin (JETEC No.E7-1)
Basing Designation for BOTTOM VIEW	6BT

Pin 1 – Cathode of Unit No.1
Pin 2 – Plate of Unit No.2
Pin 3 – Heater
Pin 4 – Heater



Pin 5 – Cathode of Unit No.2
Pin 6 – Internal Shield
Pin 7 – Plate of Unit No.1

SWITCHING SERVICE

Values are for Each Unit

Maximum Ratings, *Absolute Values:*

PEAK INVERSE PLATE VOLTAGE	360 max.	volts
PEAK PLATE CURRENT■	30 max.	ma
DC PLATE CURRENT	10 max.	ma
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	150 max.	volts
Heater positive with respect to cathode.	150 max.	volts
BULB TEMPERATURE (At hottest point on bulb surface)	120 max.	°C

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	*Min.*	*Max.*	
Heater Current	1	180	220	ma

Note 1: With 6.3 volts ac or dc on heater.

○ Without external shield.

■: See next page.

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TENTATIVE DATA

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	Note	Min.	Max.	
Direct Interelectrode Capacitance (Each unit):				
Plate to cathode.	2	–	2	μμf
Plate Current (Each unit)	1,3	3	9	ma
Heater–Cathode Leakage Current (Each unit):				
Heater negative with respect to cathode.	1,4	–	20	μa
Heater positive with respect to cathode.	1,4	–	20	μa
Leakage Resistance between plate and all other electrodes tied together (Each unit)	1,5	100	–	megohms

Note 1: With 6.3 volts ac or dc on heater.

Note 2: Without external shield and with electrodes of unit not under test connected to ground.

Note 3: With dc plate volts = 1.2. Electrodes of unit not under test connected to ground.

Note 4: With 150 volts dc between heater and cathode.

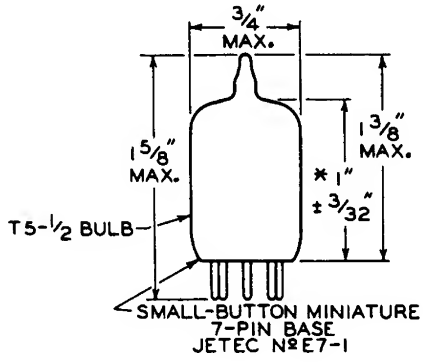
Note 5: With plate 300 volts negative with respect to all other electrodes tied together.

SPECIAL RATINGS & PERFORMANCE DATA

Heater-Cycling Life Performance:

Cycles of Intermittent Operation. . . . 2000 min. cycles

Under the following conditions: heater volts = 7.5 cycled one minute on and four minutes off, heater 180 positive with respect to cathode, and plate volts = 0.



■ Under the following conditions: rectangular pulse; pulse duration, 10 microseconds; pulse-repetition rate, 1000 pps; duty factor, 0.01 ± 0.1 per cent; rise time, less than 1 microsecond; fall time, less than 2 microseconds; overshoot, less than 5 per cent; and droop, less than 10 per cent.

* Measured from base seat to bulb-top line as determined by ring gauge of 7/16" I.D.

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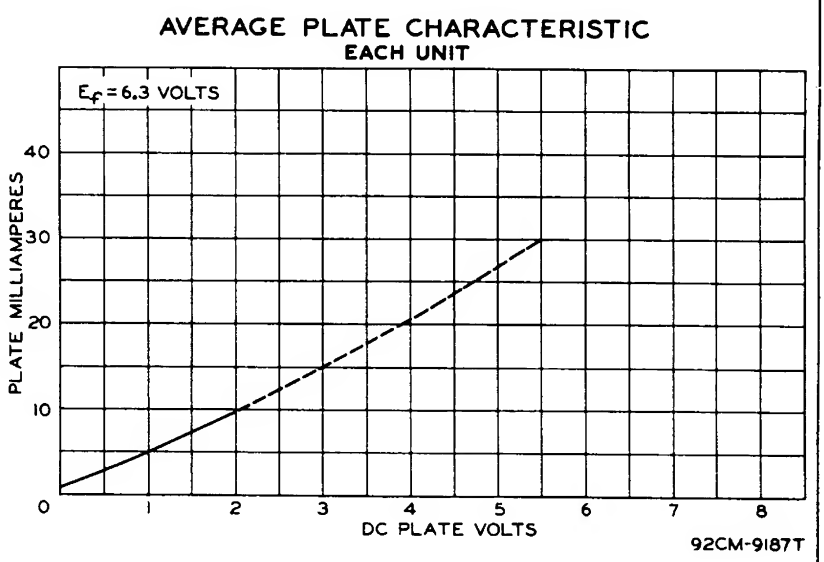

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